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EXAMINER

WANG, THOMAS D

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 12/14/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,791

Applicant(s)

KINZHALIN ET AL.

Examiner

Thomas D. Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☒ Claim(s) 7 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 14 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the application filed June 14, 2001.
2. Claims 1-20 have been examined.

Priority

3. The priority date considered for this application is May 16, 2001.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: FIG. 6 Item 606 and Item 610. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The abstract of the disclosure is objected to because it contains the phrases "An invention is disclosed" which is a phrase that can be implied. Correction is required. See MPEP § 608.01(b)(c).

Claim Objections

6. Claim 7 is objected to because of the following informalities:

A reference is made to claim 9, which is not a preceding claim. Appropriate correction is required. For compact prosecution, examiner treats claim 7 as "A method as recited in claim 5".

Claim Rejections - 35 USC § 112

7. Claims 4-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "assertion result set" in line 2. There is insufficient antecedent basis for this limitation in the claim. Thus, claims 5-7 are also rejected for being dependent on a rejected base claim.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 merely recites as a method for automated acquisition of assertions in a specification of a computer program, in which "receiving an input spec... obtaining a sentence... determining whether the obtained sentence... marking the obtained sentence...", that consists solely of manipulation of an abstract idea, i.e. just tracking of

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object references, without any limitation to a practical application claimed is non-statutory. In other words, the disclosed operations in performing the acquisition of assertion in a specification alone is not directed to, limited to, any practical application; and without any further step(s) for implementing the result, of the tracking, maintaining and/or indicating, hence thus-tracked results are just data/information. Thus, the claimed practical application must be a further limitation upon the claimed subject matter if the process is confined to the internal operations of the computer. See *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759. See also *Schrader*, 22 F.3d at 295, 30 USPQ2d at 1459 and *Examination Guidelines for Computer-Related Inventions-Final Version*, pages 5. See MPEP § 2106 (IV)(B)(2)(e).

As to claims 8 and 14 merely recite a computer programs representing computer listings *per se* (computer readable code), that is, descriptions or expressions of such a program and that is descriptive material *per se*, non-functional descriptive material, and are not statutory because they are neither physical "thing" nor statutory processes, as there are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed aspects of the invention which permit the computer program's functionality to be realized. Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process, without the computer-readable medium needed to realize the computer program's functionality. In contrast, a claimed computer-readable medium encoded with a computer program and the medium which permit the computer program's functionality

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to be realized, and is thus statutory. See *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760. *In re Sarkar*, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978). See also *Examination Guidelines for Computer-Related Inventions-Final Version*, pages 8-11. See MPEP § 2106 (IV)(B)(1)(a)/(b).

On this basis, claim 1, 8 and 14 are rejected under 35 U.S.C. § 101.

Claims 2, 4-7, 9-13, 15 and 17-20, which depend respectively from claim 1, 8 and 14, are also rejected under 35 U.S.C. §101 as they merely recite non-functional descriptive material.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

11. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by *Pavela* (US 6,332,211, hereinafter *Pavela*)

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12. With respect to claim 1, *Pave/a* discloses a method for automated acquisition of assertions in a specification of a computer program, comprising the operations of:

- receiving an input specification (source file), wherein the input specification comprises a plurality of sentences (commands or tags) (E.g., see FIG. 2:202, col. 2:12-17);
- obtaining a sentence (tag or a test code object) from the plurality of sentences; (E.g., see FIG. 5:504, col. 6:4);
- determining whether the obtained sentence is a testable (executable test code object) assertion (tag) (E.g., see col. 6:28-30, tags are associated with the members of the library of executable test code object); and
- marking (indexing) the obtained sentence as testable when the obtained sentence is a testable assertion (E.g., see FIG. 3:320, col. 6:47 a test index is automatically generated from the identified system elements).

13. With respect to claim 2, *Pave/a* also discloses a method further comprising the operation of identifying a context (tags) within the specification (E.g., see FIG. 7:702, col. 7:23-44).

14. With respect to claim 3, *Pave/a* further discloses a method wherein the operation of obtaining the sentence from the plurality of sentences includes parsing (scanning and identifying) the context to obtain the sentence (E.g., see FIG. 7:706, col. 14:24-25, performing the step of scanning the interpreted tags to identify the system elements).

15. With respect to claim 4, *Pave/a* also discloses a method further comprising the operation of adding (incorporating) the marked obtained sentence to an assertion result

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set (E.g., see col. 11:30-32, a test index identifying system elements test code is generated and incorporated into the test plan).

16. With respect to claim 5, *Pave/a* further discloses a method wherein the context is a set of circumstances (configuration) related to the obtained sentence (E.g., see col. 5:48-50, test procedures, verification, system configuration, and the parts used by the test case are entered).

17. With respect to claim 6, *Pave/a* further discloses a method wherein each assertion comprises at least one sentence of the specification (E.g., see col. 5:5-7, each tag is associated with a member of a library of executable code objects).

18. With respect to claim 7, *Pave/a* further discloses a method wherein each assertion can comprises at least two sentences of the specification (See FIG. 5:502 and 5:504, wherein test scenario is specified by the plurality of lines; col. 2:32-35, 11:24-26, each tag is associated with a member of a library of executable code objects defining a set of instructions).

19. With respect to claim 8, *Pave/a* discloses a computer program for automatically obtaining assertions from a specification for a computer program, comprising:

- a code segment that receives an input specification for a computer program (E.g., see col. 2:12-17, this claim is directed to a different class of statutory subject matter than claim 1, but recites the same limitations as method claim 1.

Since the reference teaches every limitation of claim 1, it therefore also reads on every limitation of this claim);

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- a code segment that identifies a context within the input specification (E.g., see col. 6:45, this claim is directed to a different class of statutory subject matter than claim 2, but recites the same limitations as method claim 2. Since the reference teaches every limitation of claim 2, it therefore also reads on every limitation of this claim);
- a code segment that parses the identified context to obtain assertions (E.g., see col. 14:24-25, this claim is directed to a different class of statutory subject matter than claim 3, but recites the same limitations as method claim 3. Since the reference teaches every limitation of claim 3, it therefore also reads on every limitation of this claim);
- a code segment that determines whether the obtained assertions are testable statements (E.g., see col. 6:28-30, this claim is directed to a different class of statutory subject matter than claim 1.3, but recites the same limitations as method claim 1.3. Since the reference teaches every limitation of claim 1.3, it therefore also reads on every limitation of this claim); and
- a code segment that adds (include) the obtained assertions to an assertion result set (a list of desired system elements that are included in a test plan), wherein the assertion result set can be used to facilitate (allow) testing (verifying) of the specification (E.g., see col. 2:18-21, a test index identifying system elements tested by the test code is generated and incorporated into the test plan, allowing the user to verify that all desired system elements are exercised by the automated test code).

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20. With respect to claim 9, *Pave/a* also discloses a computer program further comprising a code segment that filters (scans) the identified context prior to parsing (interpreting/translating) the context (E.g., see FIG. 3:319,325, col. 6:45-50, tags are scanned to identify system elements; col. 6:24-44, tags are interpreted, translated, and conversational language statement are generated).

21. With respect to claim 10, *Pave/a* further discloses a computer program wherein an assertion is an implied statement that can be tested (executed) (E.g., see FIG. 6 and 8; col. 6:6-9 test objects which is capable of performing an assigned function in support of the automated test procedure; col. 7:34-35 test code has been generated can be executed).

22. With respect to claim 14, *Pave/a* discloses a computer program for automated acquisition of assertions in a specification of a computer program, comprising:

- a code segment that receives an input specification, wherein the input specification comprises a plurality of sentences (E.g. see col. 2:12-17, this claim is directed to a different class of statutory subject matter than claim 1.1, but recites the same limitations as method claim 1.1. Since the reference teaches every limitation of claim 1.1, it therefore also reads on every limitation of this claim);
- a code segment that obtains a sentence from the plurality of sentences (E.g., see col. 6:4, this claim is directed to a different class of statutory subject matter than claim 1.2, but recites the same limitations as method claim 1.2. Since the

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reference teaches every limitation of claim 1.2, it therefore also reads on every limitation of this claim);

- a code segment that determines whether the obtained sentence is a testable assertion (E.g., see col. 6:28-30, this claim is directed to a different class of statutory subject matter than claim 8, but recites the same limitations as method claim 8. Since the reference teaches every limitation of claim 8, it therefore also reads on every limitation of this claim); and
- a code segment that marks the obtained sentence as testable when the obtained sentence is a testable assertion (E.g., see col. 11:30-32; 2:18-21, this claim is directed to a different class of statutory subject matter than claims 4 and 8, but recites the same limitations as method claims 4 and 8. Since the reference teaches every limitation of claims 4 and 8, it therefore also reads on every limitation of this claim).

23. With respect to claim 15, *Pavela* also discloses a computer program further comprising a code segment that identifies a context within the specification (E.g., see col. 6:45, this claim is directed to a different class of statutory subject matter than claim 2, but recites the same limitations as method claim 2. Since the reference teaches every limitation of claim 2, it therefore also reads on every limitation of this claim).

24. Claim 11 and 18 are both rejected on the same base of claim 5.

25. Claim 12 and 19 are both rejected on the same base of claim 6.

26. Claim 13 and 20 are both rejected on the same base of claim 7.

27. Claim 15 is rejected on the same base of claim 2.

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28. Claim 16 is rejected on the same base of claim 3.

29. Claim 17 is rejected on the same base of claim 4.

Conclusion

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Willis et al. (US 6,321,376) reference teaches an apparatus and method for semi-automated test case generation and application of language conformity test cases.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Wang whose telephone number is (571) 272-7954. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TUAN DAM
SUPERVISORY PATENT EXAMINER

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November 19, 2004